ABSTRACT

Certain non-nucleoside compounds that will selectively inhibit telomerase by targeting the nucleic add structures, such as G-quadruplexes, that may be associated with human telomeres or telomerase have been identified. Inhibition of human telomerase by two perylenetetracarboxylic acid diimides and a carbocyanine has been demonstrated. ^{1}H-NMR studies have evidenced the stabilization of a G-quadruplex by the perylenetetracarboxylic acid diimide compounds and provided evidence that these and structurally related compounds inhibit the telomerase enzyme by a mechanism consistent with interaction with G-quadruplex structures.